

REMARKS

No claims are amended, no claims are canceled, and no claims are added; as a result, claims 59-88 are now pending in this application.

Interview Summary

Applicant thanks Examiner Tuan T. Lam and Supervisory Patent Examiner Timothy P. Callahan for the courtesy of a telephone interview conducted on February 7, 2006 with Applicant's representatives and U.S. registered patent attorneys Ann M. McCrackin and Robert Madden. Also participating in the telephone interview was European patent attorney Alan MacDougall.

During the telephone interview, Applicant's representatives and attorney MacDougall discussed amendments made to the claims in a response filed by Applicant's representatives on September 1, 2005. In addition, the current rejections of the claims made in a Non-final Office Action mailed October 13, 2005 were also discussed.

As a result of these discussions, Supervisory Patent Examiner Callahan stated that the current 35 U.S.C. § 102(b) rejections would be withdrawn, and that Applicant's representatives should file a response to the Non-final Office Action mailed October 13, 2006 in order to present their arguments against the remaining rejections.

Interview Request

Based on the results of the discussion from the telephone interview of February 7, 2006, and the arguments presented below, as well as, related arguments presented in the previous responses to prior Office Actions in this application, Applicant believes pending claims 59-88 are patentable, and respectfully request notification to that effect. However, if the Examiner disagrees, Applicant respectfully requests that the Examiner contact Applicant's attorney Ann McCrackin at (612) 349-9592 to arrange a telephone interview to discuss the Examiner's additional concerns prior to the issuance of another Office Action.

MPEP Requirements for Prior Art Searching

Recommendation for One Search

MPEP § 904 explains how an examiner should conduct a search:

“The first search should cover the invention as described and claimed, including the inventive concepts toward which the claims appear to be directed. It should not be extended merely to add immaterial variants.”¹

MPEP § 904.03 provides further directions for conducting the search:

“It is a prerequisite to a speedy and just determination of the issues involved in the examination of an application that a careful and comprehensive search, commensurate with the limitations appearing in the most detailed claims in the case, be made in preparing the first action on the merits so that the second action on the merits can be made final or the application allowed with no further searching other than to update the original search.”²

The Applicant respectfully points out that the independent claims 59, 75, and 84 have contained the elements outlined below since at least August 8, 2002 when a CPA was filed; and that the elements outlined below have been searched five times.

- Claims 59 and 84 have included the elements:
 - a first generating means for generating a first periodic signal;
 - a second generating means for generating a second periodic signal which is in anti-phase with the first periodic signal;
- In addition, claims 59 and 84 have also included:
 - wherein said first and second generating means are arranged to generate the respective first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistances.
- Additionally, independent claim 75 has included the elements:
 - applying a first periodic signal to be frequency divided by the frequency divider circuit to a control electrode of the respective transistor of the or each odd amplifier stage; and

¹ See MPEP § 904 “How to Search”.

² See MPEP § 904.03 “Conducting the Search.”

applying a second periodic signal which is in anti-phase with the first periodic signal to a control electrode of the respective transistor of the or each even amplifier stage,

- Furthermore, claim 75 has also included:
wherein said applying steps apply analogue periodic signals to said control electrodes, which analogue periodic signals have an amplitude which cause said transistors to not fully open or fully close but to act as a variable resistances.

Since the filing of the CPA in August 2002, Office Actions were issued on the following dates:

- Non-final Office Action mailed October 7, 2002.
- Non-final Office Action mailed May 13, 2003.
- Non-final Office Action mailed June 25, 2004.
- Non-final Office Action mailed February 1, 2005 (Supplement Office Action mailed March 1, 2005).
- Non-final Office Action mailed October 13, 2005.

Prior to issuing each of the five Office Actions listed above, the Patent Office's prior art search was updated and the Patent Office's image file wrapper in PAIR was also updated accordingly. If each of the five prior art searches met the requirements of MPEP § 904.03 (i.e., the searches were "careful and comprehensive search, commensurate with the limitations appearing in the most detailed claims in the case"), then the Applicant respectfully submits that the five searches have covered the currently pending claims.

Thus, the Applicant submits that the number of searches conducted is already more than required by recommended Patent Office procedures and that additional searching for immaterial variants will only add to the cost of the prosecution of the present application.

Requirement to Use the "Best" Reference

MPEP § 904.03 provides further instructions on selecting the references to cite:

"In selecting the references to be cited, the examiner should carefully compare the references with one another and with the applicant's *disclosure* to avoid the citation of an unnecessary number. The examiner is not called upon to cite *all* references that may be available, but only the 'best' (37 CFR 1.104(c)). Multiplying references, any one of

which is as good as, but no better than, the others, adds to the burden and cost of prosecution and should therefore be avoided.”³

Finally, MPEP § 904.03 concludes that “[t]he best reference should always be the one used.”

As stated above, since the filing of the CPA in August 2002, five Office Actions were issued. Between those five Office Actions, five different references or combinations of references are applied as a basis for rejecting the independent claims 59, 75, and 84. The references or combinations of references include:

1. Suzuki et al. as a single reference 103(a) rejection in the 10/07/2002.
2. Rollins et al. as a single reference 103(a) rejection in the 10/07/2002.
3. Kono (JP 60-224319) in view of Schilling et al (Electronic circuits, 1989, pages 138-151) as a 103(a) rejection in the 5/13/2003 Office Action.
4. Kono (JP 60-224319) as a 102(b) rejection in both the 2/01/2005 (as maintained in the 3/01/2005 Supplemental Office Action) and the 10/13/2005 Office Action.
5. Murray (US Pat. No. 4,845,727) in view of Weste and Eshraghian (Weste et al.) as a 103(a) rejection in 10/13/2005 Office Action.

The Applicant respectfully points out the MPEP requirements to use the “best” reference and to avoid the citation of an unnecessary number of references. The Applicant submits that multiple references that are no better than the others have been cited and relied on already. The Applicant requests that the citing of additional references that are not better than the above references be avoided. The Applicant also requests that allowance of the claims over these references be indicated for the reasons stated in previous responses as well as the reasons stated below.

§102 Rejection of the Claims

Claims 59-70, 72-73, 75-82, and 84-85 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kono (JP 60-224319). Applicant respectfully traverses the rejection of claims 59-70, 72-73, 75-82, and 84-85.

³ See MPEP § 904.03 “Conducting the Search”.

Applicant's representatives believe, based on the above mentioned telephone interview, that the 35 U.S.C. § 102(b) rejection of claims 59-70, 72-73, 75-82, and 84-85 is withdrawn.

However, in order to be fully responsive to the Office Action, Applicant maintains that claims 59-70, 72-73, 75-82, and 84-85 are not anticipated by Kono because Kono fails to disclose in a single prior art reference each of the elements recited in claims 59-70, 72-73, 75-82, and 84-85. Applicant believes that claims 59-70, 72-73, 75-82, and 84-85 are not anticipated by Kono for at least the reasons stated in Applicant's previous response⁴ on pages 13-15, which are reproduced below for the Examiner's convenience.

The Kono document fails to teach all of the elements of claims 59-70, 72-73, 75-82, and 84-85.

The Kono document fails to disclose in a single prior art reference each of the elements recited in claims 59-70, 72-73, 75-82, and 84-85. For example, claims 59 and 84 recite, "a first generating means for generating a first periodic signal; a second generating means for generating a second periodic signal which is in anti-phase with the first periodic signal," and further, "wherein said first and second generating means are arranged to generate the respective first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistances."

In another example, claim 75 recites, "applying a first periodic signal to be frequency divided by the frequency divider circuit to a control electrode of the respective transistor of the or each odd amplifier stage; and applying a second periodic signal which is in anti-phase with the first periodic signal to a control electrode of the respective transistor of the or each even amplifier stage," and further, "wherein said applying steps apply analogue periodic signals to said control electrodes, which analogue periodic signals have an amplitude which cause said transistors to not fully open or fully close but to act as a variable resistances."

In a further example, claim 85 recites, "a first generating circuit operable to generate a first periodic signal; a second generating circuit operable to generate a second periodic signal which is in anti-phase with the first periodic signal," and further, "wherein said first and second generating circuits are arranged to generate the respective first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistances."

Applicant submits that Kono fails to teach these elements as recited in claims 59, 75, 84, and 85. A previous Office Action in this matter mailed on May 13, 2003 admits as much, wherein the previous Office Action on page 3 states,

⁴ See Response mailed by Applicant's representatives on September 1, 2005 and indicated as having been received in the U.S. Patent and Trademark Office on September 6, 2005 in the 09/541,857 application.

"The difference seen between Kouno reference and the present invention is that Kouno does not specify the first and second periodic signals as analog periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistance as called for in claims 59, 75 and 84." Claim 85 was added subsequent to this Office Action. In contrast, the present Office Action on page 3 states, "although the first and second generating mean are not shown, the transistors of the frequency divider are capable of receiving analog periodic signals so that not fully open and fully closed but to act as variable resistance as called for in claims 59, 75, 84 and 85." Applicant disagrees.

As noted above, anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. The fact that a transistor may be, while not admitting the circuits in Kono are, capable of receiving an analog periodic signal is not the standard used to determine when a reference anticipates a claim. Thus, the Office Action admits that Kono fails to show all of the elements in claims 59, 75, 84, 85. Because the Office Action fails to present any extrinsic evidence that would indicate that the elements recited in claims 59, 75, 84, and 85 - and admittedly not shown in Kono - are necessarily present in Kono, the Office Action fails to state a *prima facie* case of anticipation with respect to claims 59, 75, 84, and 85.

In a further example, claim 75 as amended now recites, "wherein each of the analog periodic signals is referenced to a same voltage supply." [Emphasis added]. In addition, claims 59, 84 and 85, as amended now recite, wherein each of the transistors of each odd amplifier stage that is used to modulate the propagation delay through the odd amplifier stage references the first periodic signal to a voltage supply, and each of the transistors of each even amplifier stage that is used to modulate the propagation delay through the even amplifier stage references the second periodic signal to the same voltage supply. [Emphasis added].

By way of example, and not by way of limitation, attention is directed to FIG. 1C of the application, which includes latches 10A and 10B. As shown in FIG. 1C, latch 10A includes transistors N3 and N4 receiving the IN, or first periodic signal, and latch 10B includes transistors N3 and N4 receiving the INB, or second periodic signal. As shown in FIG. 1C, each of the instances of transistors N3 and N4 are referenced to the same voltage supply NSUP.

In contrast, FIG. 9 of Kono shows switches 7 and 8 receiving a CL1 input, referencing the CL1 input to the V_{SS} voltage level, wherein switches 10 and 11 are shown as receiving the CL2 input, and referencing the CL2 input to the V_{DD} voltage level. Thus, Kono fails to teach referencing the first periodic signal and the second periodic signal to the same voltage supply, as recited in claims 59, 75, 84, and 85.

Claims 60-70 and 72-73 depend from claim 59, and claims 76-82 depend from claim 75. For reasons analogous to those stated above and additional elements in the claims, Applicant respectfully submits that the Office action fails

to state a *prima facie* case of anticipation with respect to dependent claims 60-70, 72-73, and 76-82.

For at least the reasons stated above, Applicant respectfully requests that the next official communication indicate that the 35 U.S.C. § 102(b) rejection based on Kono is withdrawn. Further, Applicant respectfully requests reconsideration and allowance of claims 59-70, 72-73, 75-82, and 84-85.

§103 Rejection of the Claims

Applicable Law

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.*

The *Fine* court stated that:

Obviousness is tested by "what the combined teaching of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 878 (CCPA 1981)). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined *only* if there is some suggestion or incentive to do so." *Id.* (emphasis in original).

The M.P.E.P. adopts this line of reasoning, stating that:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)). (Emphasis added).

§103 Rejection of claim 74 (Kono), claims 71 and 83 (Kono/Maemura); and claims 87 and 88 (Kono).

Claim 74 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Kono (JP 60-224319). Claims 71 and 83 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kono in view of Maemura (U.S. Pat. No. 5,172,400). Claims 87 and 88 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kono. Applicant respectfully traverses each of the rejections of claims 71, 74, 83, 87, and 88.

Applicant believes they have established, for at least the reasons stated on pages 15-16 of Applicants previous response⁵ that claims 74, 87, and 88 are not obvious, and are thus patentable over Kono, and also that claims 71 and 83 are not obvious, and are thus patentable over the proposed combination of Kono and Maemura.

As noted in Applicant's above mentioned previous response, Kono fails to disclose each of the elements included in claims 71, 74, 83, 87, and 88. The additional reference of Maemura fails to provide a disclosure of the elements included in claims 71 and 83 and missing from Kono.

Further, as noted in Applicant's above mentioned previous response, Kono teaches away from the elements included in claims 71, 74, 83, 87, and 88 because Kono discloses forcing the transistors receiving the clock signals to the supply levels, and thus teaches away from operating these transistors in a manner so that they act as variable resistors, as recited in claims 59, 75, 84, and 85 (from one of which claims 71, 74, 83, 87, and 88 depend).

Applicant submits that since Kono teaches away from operating the transistors in a manner so that they act as variable resistors, one of ordinary skill in the art would be discouraged from applying a signal which would cause the transistors in the circuit of FIG. 9 in Kono to operate in the manner disclosed in claims 59, 75, 84, and 85. Thus, even if a reference could be found (while Applicant does not admit or suggest that such a reference or references exist) that describes the analog periodic signals included in claims 59, 75, 84, and 85, it would not be obvious to one of ordinary skill in the art to make such a combination.

Applicant believes this point is further illustrated by the fact that in a prior Office Action mailed May 13, 2003 in this application, claims 59-70, 72-82, and 84 were initially rejected

⁵ *Id.*

under 35 U.S.C. §103(a) as being unpatentable over Koumo [sic] (JP 60-224319) in view of Schilling et al. (Electronic circuits, 1989, pages 138-151). However, without any amendments to these claims, these claims were then allowed in the next Office Action mailed on June 25, 2004 in this application.

As already noted above, at the time of the Office Action mailed May 13, 2003, claims 59 and 84 included the elements:

a first generating means for generating a first periodic signal;
a second generating means for generating a second periodic signal which is in anti-phase with the first periodic signal;

At that time, claims 59 and 84 also included:

wherein said first and second generating means are arranged to generate the respective first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistances.

In addition, at the time of the Office Action mailed May 13, 2003, independent claim 75 included the elements:

applying a first periodic signal to be frequency divided by the frequency divider circuit to a control electrode of the respective transistor of the or each odd amplifier stage; and

applying a second periodic signal which is in anti-phase with the first periodic signal to a control electrode of the respective transistor of the or each even amplifier stage,

At that time, claim 75 also included:

wherein said applying steps apply analogue periodic signals to said control electrodes, which analogue periodic signals have an amplitude which cause said transistors to not fully open or fully close but to act as a variable resistances.

Thus, Applicant believes, and the at least one of the previous Office Actions admits that claims 59-84 are patentable over Kono, either alone, or in any of the proposed combinations of references previously presented.

For at least the reasons stated above, Applicant respectfully requests withdrawal of the rejections, and reconsiderations and allowance of claims 71, 74, 83, 87, and 88.

§103 Rejection of claims 59-70, 72-82, and 84 (Murray/Weste et al.).

Claims 59-70, 72-82, and 84 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Murray (US Pat. No. 4,845,727) prior art of record, in view of Weste and Eshraghian (Weste et al.), principles of CMOS VLSI Design, second edition, Fig. 5.55b, pages 328, 1993, newly cited prior art. Applicant respectfully traverses this rejection of claims 59-70, 72-82, and 84.

Claim 85 is not specifically included in the above paraphrased statement of the rejection from page 6 of the Office Action. However, claim 85 is mentioned, for example on the second line of page 8 of the Office Action. In the event that claim 85 is included in this rejection (while Applicant expressly does not admit that claim 85 is included in this rejection), Applicant respectfully traverses any 35 U.S.C. 103(a) rejection of claim 85 based on the proposed combination of Murray and Weste et al.

Claims 59-70, 72-82, and 84 are not obvious in view of the proposed combination of Murray with Weste et al. because the proposed combination of Murray and Weste et al. fails to teach or suggest each of the elements included in claims 59-70, 72-82, and 84.

In the Office Action, the entire second paragraph on page 7 and the first two lines on page 8 includes a list of elements purported by the Office Action to be included in the claims and which the Office Action admits are NOT shown in Murray. However, in some instances, the claim elements as listed in the Office Action are not accurate quotes of the claim language. Therefore, when statements from the Office Action are reproduced below, language from the actual claim that was omitted in the restatements in the Office Action is shown in brackets. In this regard, included in this list is an admission on page 7 of the Office Action that Murray does not show:

wherein said first and second generating means are arranged to generate the respective first and second period signal[s] as analogue periodic signals having an amplitude which causes said transistors to be [not] fully open or closed but to act as variable resistances.

In an attempt to supply these particular elements, the Office Action relies on Fig. 5.55(b) of Weste et al. However, Fig. 5.55(b) of Weste et al. merely shows, according to the description

in Weste et al. of Fig. 5.55b, "a latch that is based on a static RAM cell." There is no disclosure in Fig. 5.55(b) of Weste et al. of any type of input signal being applied to the latch of Fig. 5.55(b), let alone the particular type of analogue periodic signals claimed. Thus, the additional reference of Weste et al. also fails to disclose the first and second generating means as arranged in claims 59, 75, and 84.

In addition, the Office Action on page 8 states:

Regarding the limitation of "first and second periodic signals as analogue periodic signals having an amplitude which causes said transistors to be not fully open or fully closed but to act as variable resistance", the transistors (transistors receiving clock signals CLOCK) of Weste is capable of receiving analogue periodic signals having an amplitude with causes said transistors to be not fully open or fully closed but to act as variable resistance. (Emphasis added).

Applicant responds that as already noted, the MPEP and the relevant case law require:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. . . . Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.⁶

A statement in the Office Action that a circuit is capable of receiving analogue periodic signals (wherein Applicant expressly does not admit that the circuit in Fig. 5.55(b) of Weste et al. is capable of receiving analogue periodic signals) fails to meet that requirement that the "prior art reference (or references when combined) must teach or suggest all the claim limitations." Since the proposed combination of Murray and Weste et al. fails to teach or suggest at least the elements of analogue periodic signals arranged as in claims 59-70, 72-82, and 84, the Office Action fails to state a *prima facie* case of obviousness with respect to claims 59-70, 72-82, and 84.

Still further, the Office Action admits that the elements recited in claims 61, 62, 76, 64, 77, 79, 78, 70, 82, and 74 are not taught or suggested by the proposed combination of Murray and Weste et al. Because the Office Action fails to cite any other references that teach or suggest the claim elements that are missing from the proposed combination of Murray and Weste et al., Applicant submits that the rejections rely on references or other evidence that is not in the

⁶ See *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

record. However, since the Examiner has not cited a reference or provided an affidavit that shows how these element are present in the prior art, the Office Action fails to state a *prima facie* case of obviousness with respect to claims 61, 62, 76, 64, 77, 79, 78, 70, 82, and 74. Therefore, Applicant respectfully requests withdrawal of the rejection and reconsideration and allowance of claims 61, 62, 76, 64, 77, 79, 78, 70, 82, and 74.

For at least the reasons stated above, the proposed combination of Murray and Weste et al. fails to teach or suggest each of the elements included in claims 59-70, 72-82, and 84.

The Office Action fails to state a *prima facie* case of obviousness with respect to claims 59-70, 72-82, and 84, because the Office Action fails to meet the requirements for forming the proposed combination of Murray with Weste et al.

As noted above:

In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. **First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.** Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. **The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.** *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)). (Emphasis added).

In an attempt to meet these requirements, the Office Action on page 8 states,

Weste et al's D flip flop is simple having only eight transistors. Therefore, it would have been obvious to person skilled in the art at the time of the invention was made to use Weste's D flip flop circuits in place of Murray's flip flop circuits 1 and 2 because Weste et al.'s flip flop circuits occupy less space on a chip.

Figure 5.55(b) of Weste et al. shows a circuit with four transistors and three inverters. Therefore, Applicant disagrees that Weste et al. shows a D flip flop having only eight transistors and being "simple." Further, the Office Action fails to show how the circuit or circuits of "Figure 5 of Weste et al." (wherein Applicant's representatives are uncertain exactly which circuit or circuits in "Figure 5" the Office Action is referring to) occupy less space on a chip. Further, the Office Action fails to provide any evidence that Murray is concerned with occupying

less space on a chip, and thus would motivate one of ordinary skill in the art to combine any of the circuits in Fig. 5.55 with Murray. Thus, the proposed combination of Weste et al. and Murray appears to be based on an attempt to reconstruct the claims of the present application using impermissible hindsight.

For at least the reasons sated above, the Office Action also fails to establish a *prima facie* case of obviousness with respect to claims 59-70, 72-82, and 84, because the Office Action fails to meet the requirements for forming the proposed combination of Murray with Weste et al.

Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claims 59-70, 72-82, and 84, and reconsideration and allowance of claims 59-70, 72-82, and 84.

Claim 85

As noted above, Applicant does not admit that claim 85 is included in the 35 U.S.C. § 103(a) rejection based on the proposed combination of Murray and Weste et al. However, for reasons analogous to these stated above with respect to claims 59-70, 72-82, and 84, claim 85 is not obvious, and therefore is patentable over the proposed combination of Murray and Weste et al. because the proposed combination of Murray and Weste et al. fails to teach or suggest each of the elements included in claim 85, and further, because the Office Action fails to meet the requirements for forming the proposed combination of Murray and Weste et al. with respect to claim 85.

Applicant respectfully requests withdrawal of any rejections, and reconsideration and allowance of claim 85.

§103 Rejection of claims 71 and 83 (Murray/Weste et al./Maemura), and claims 87 and 88 (Murray/Weste et al.).

Claims 71 and 83 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Murray (US Pat. No. 4845,727) in view of Weste et al. and in further view of Maemura (U.S. Pat. No. 5,173,400). Claims 87 and 88 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Murray in view of Weste et al. Applicant respectfully traverses each of these rejections of claims 71, 83, and 87-88.

Claim 71 depends from claim 59, claim 83 depends from claim 75, claim 87 depends from claim 84, and claim 88 depends from claim 85. Therefore, dependent claims 71, 83, 87, and 88 include all of the elements recited in the claim from which they depend. Applicant believes they have established that claims 59, 75, 84 are not obvious in view of the proposed combination of Murray and Weste et al. In addition, for reasons analogous to those stated above with respect to claims 59, 75, and 84, claim 85 also includes elements recited in the claim that are not taught or suggested by the proposed combination of Murray and Weste et al.

Further, the additional reference of Maemura fails to remedy the deficiencies present in the proposed combination of Murray and Weste et al. with respect to claims 71 and 83.

For at least the reasons stated above with respect to claims 59, 75, 84, and additional elements recited in claims 71, 83, 87, and 88, claims 71 and 83 are not obvious and are patentable over the proposed combination of Murray, Weste et al., and Maemura, and claims 87 and 88 are not obvious and are patentable over the proposed combination of Murray and Weste et al.

Applicant respectfully requests withdrawal of the rejections and reconsideration and allowance of claims 71, 83, 87, and 88.

Non-Rejected Claims

The Office Action fails to state a grounds for a rejection of claim 86. Therefore, Applicant respectfully requests that the next official communication indicate that claim 86 is allowed.

Reservation of Rights

Applicant does not admit that references cited under 35 U.S.C. §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserves the right to swear behind them at a later date. Arguments presented to distinguish such references should not be construed as admissions that the references are prior art.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9592 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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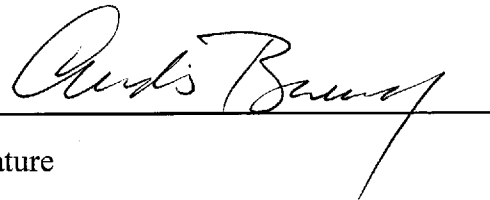
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